

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
TEXARKANA DIVISION**

**LG ELECTRONICS, INC.,**

**Plaintiff,**

**v.**

**HITACHI, LTD., et al.,**

**Defendants.**

**Civil Case No. 5:07cv90-DF**

**REPLY CLAIM CONSTRUCTION BRIEF OF LG ELECTRONICS, INC.**

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## INTRODUCTION

Defendants' approach to claim construction is predictable. For the most part, they urge the Court to limit unambiguous, broadly recited elements of the claims to specific, narrow embodiments described in the patent as mere examples of the invention. Defendants suggest this is required by the Federal Circuit's *Phillips* decision. But *Phillips* mandated no such rule. Instead, *Phillips* reaffirms the "bedrock principle" that the "claims of a patent define the invention to which the patentee is entitled the right to exclude." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005). To be sure, the Federal Circuit warned against the erroneous approach of "reading limitations from the specification into the claim." *Id.* at 1323; *see also Decisioning.com, Inc. v. Federated Dept. Stores, Inc.*, 2008 WL 1966704, \*6 (Fed. Cir., May 7, 2008). Yet time and time again, Defendants toss aside the plain and ordinary meaning of words applied consistently with the specification in an effort to improperly preclude LGE from the full scope of its important inventions. The Court should reject Defendants' proposals and accept those made by LGE.

## REPLY

Below we address Defendants' assertions with respect to each of the patents. For consistency and to assist the Court's review, we maintain the order and format used in LGE's Opening Brief. The Court should note that Defendants' have changed their constructions for many of the claim terms; while we applaud the instances in which Defendants have changed their constructions to adopt the ones proposed by LGE, for the most part Defendants widely varying views on the proper meaning of the claims simply highlights the litigation-driven, erroneous analysis that Defendants urge the Court to adopt.<sup>1</sup>

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<sup>1</sup> Defendants contend that Exhibits 14, 26, and 27 attached to their brief are "summaries" of the prosecution histories of the '709 and '456 patents. Those exhibits are nothing of the sort. The content of the exhibits is litigation inspired advocacy, and should have been included within the body of the brief



## I. U.S. PATENT NO. 6,404,418

### A. Overview of the '418 Patent

Defendants mischaracterize the invention of the '418 patent seeking to narrow the claims to match their litigation-induced constructions. Most notably, Defendants incorrectly claim that the '418 patent does not disclose the use of LCD touch screens and wrongly argue that the “request for identification” key is limited to use on a remote control. Defs.’ Br. at 22-23. These mischaracterizations are counter to the disclosure of the '418 patent.

For example, as to the first point, in the “Summary of the Invention” section, the specification repeatedly states that one object of the invention is “to discriminate among enabled and disabled *selectable* keys of a key *input unit on a screen*.” Col. 2:23-25, 28-30. The '418 patent also specifically discloses touch screens in Figure 13C of the patent, as the specification states “[in] FIG. 13C, enabled *selectable* controls S are visually distinguished from non-enabled *selectable* controls *on a display screen* such as an on-screen display (OSD).” Col. 12:55-58.

On the second point, the specification clearly discloses the use of a “request for identification”—such as an information acquisition key—in connection with all of the inventive embodiments, not just the remote controller embodiment:

More specifically, the method and apparatus of a *first embodiment* of the present invention...may be invoked...in response to a user input. If invoked in response to a user input, the enabled selectable key(s) may be identified in at least two circumstances. ... Second, the enabled selectable key(s) are identified when *an information acquisition input* for showing the enabled selectable key(s) is generated.

*When the playback unit is controlled using a remote controller*,...a second control signal is transmitted to the remote controller from the playback unit when the first control

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subject to page limitations and appropriate scrutiny. And these “summaries” do not provide a full and accurate characterization of the prosecution histories. In fact, Defendants cite to sections and figures of references not even relied upon by the Examiner. For example, the Examiner did not cite to col. 13, lines 8-21 of Yamane in the Office Actions. *See* Defs.’ Ex. 14 at 7. While LGE believes that these exhibits should be stricken, LGE simply requests that the Court refer to the full and complete prosecution histories submitted by LGE as Exhibits 20-21.

signal corresponds to *an information acquisition key* for showing the enabled selectable key...

Col. 2:57-Col. 3:16.

Defendants' inclusion of a screen-capture from an on-line editor's 2005 review of the Denon DHT-485DV "Home Theater in a Box" product in its Brief (Defs.' Br. at 23) is irrelevant and improper. *See, e.g., Plant Genetic Systems, N.V. v. DeKalb Genetics Corp.*, 315 F.3d 1335, 1346 (Fed. Cir. 2003) (noting that claim interpretation should only be made in reference to extrinsic evidence as of the filing date of the patent). LGE has not accused the Denon product of infringement in this case, and it is a further example of Defendants running away from the actual disclosures of the patents-in-suit to justify their ill-advised claim constructions.

## **B. The '418 Patent's Disputed Claim Terms**

### **1. Disputed Claim Term #1: "key" (claims 5, 6 & 9)**

<b>LGE's Construction</b>	<b>Defs.' Original Construction</b>	<b>Defs.' <i>Changed</i> Construction</b>
"A physical, hard button or marked physical area on a screen that represents a user action"	"A physical, hard button on a keyboard"	"A physical, hard button"

As an initial matter, LGE notes that Defendants changed their proposed claim construction by deleting the phrase "on a keyboard." This is telling because the two references to "keyboards" in the '418 patent specification are references to *soft keyboards* with selectable keys provided on an LCD display screen—*i.e.*, soft keys. *See* Col. 3:35-38, 12:67-13:3 (describing Fig. 13C).<sup>2</sup>

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<sup>2</sup> Defendants' reason given for the removal of the "on a keyboard" language -- "to remove potential confusion over whether a remote control unit, like that disclosed in the '418 patent, is a 'keyboard'" -- rings hollow. *See* Defs.' Br. at 24 n.15. First, as noted in Section A above, Defendants' attempts to limit the claimed invention to only the remote control embodiment is improper because it is contrary to the disclosure in the specification. While Defendants' newly proposed construction is broader in scope, Defendants reveal that they will continue to advocate their impermissibly narrow construction of the term "key" when they now claim that (with the originally proposed language) they "did not mean to imply that a key must be on a standard typewriter/computer keyboard, so long as it is an actual, physical key, as opposed to a virtual image on a touch screen." *See* Defs.' Br. at 24 n.15.

Contrary to Defendants' assertions, LGE's claim construction is not impermissibly broad—LGE's construction is fully supported by the claim language and specification. *See, e.g.*, LGE's Opening Br. at 5-8. Defendants try to exclude soft keys by asserting that the disclosure is limited to "simply graphics on a screen...just graphics," and therefore the claims should also be so limited. *Id.* at 25. Defendants are wrong for several reasons.

First, Defendants can only begin to make such an argument by first divorcing the claim term "key" from the actual language in the claims themselves, which apparently is the reason why Defendants insisted<sup>3</sup> on construing the term "key" in a vacuum even though it appears as "selectable key" in the claims of the patent. *See, e.g.*, Col. 13:40-41 ("enabled selectable key").<sup>4</sup> As shown in the following section, the parties agree (at least in part) that the term "selectable key" means that the key is "capable of being pressed by a user." Thus, when the '418 patent discloses "selectable keys" on a display screen, such keys should be understood to mean keys on the display screen that are capable of being pressed by a user—namely, *soft keys* on an LCD display. Defendants' attempts to read out the "selectable" aspect of the term "key" renders their remaining proposed claim constructions internally inconsistent and, thus, improper for this reason alone. *See, e.g., Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp.*, 93 F.3d 1572, 1582 (Fed. Cir. 1996) (stating that the court may not effectively read out limitations from the claims and must give meaning to each word of the claim).

Second, Defendants' proposed constructions should also be rejected because, contrary to Defendants' arguments, the specification does disclose soft keys and touch screens. For

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<sup>3</sup> LGE believed that it was more proper to construe the term "key" as it actually appeared in the claims of the '418 patent—namely, in the phrase "enabled selectable key"—however, Defendants wished to treat the phrase as multiple, overlapping claim terms ("key" and "selectable key") in the claim construction briefs. *See* LGE's Opening Br. at 6 n.3.

<sup>4</sup> *See also* Col. 13:44-45 (same); Col. 13:45-46 (same); Col. 13:49-50 ("non-enabled selectable key"); Col. 14:5-6 ("enabled selectable key"); Col. 14:11 (same); Col. 14:14-15 (same); Col. 14:16 (same); Col. 14:18 (same); Col. 14:20 ("non-enabled selectable key").

example, as we noted above, the “Summary of the Invention” section of the ’418 patent specification states an “object of the present invention is to discriminate among enabled and disabled *selectable keys of a key input unit on a screen.*” Col. 2:23-25; *see also* Col. 2:28-30. Defendants’ arguments to the contrary are unavailing.

For example, Defendants assert that the “keyboard” in Figure 13C is merely a simple graphical representation of the keys on the front of a CD/DVD player or on a remote control collapse. But that is just plain wrong at least because (a) the front of a CD/DVD player and remote control do not contain keys on a keyboard; thus, the keyboard of Figure 13C cannot be merely a graphical representation of such non-existing keys; and (b) it again ignores the “selectable” aspect of the keys as required by the language of the claims as discussed above. Similarly, Defendants’ argument that Figures 4 and 5 of the ’418 patent explicitly distinguish “keys” from “screens” must fail. *See* Defs.’ Br. at 26. A simple review of the actual illustrations presented in Figures 4 and 5 shows that Defendants are wrong to exclude selectable “keys” from the display “screens” disclosed in the specification as part of the display unit (*see, e.g.*, Col. 7:52-54). Both Figures 4 and 5 include a dashed-line box enclosing the key input unit and the display unit (*i.e.*, LCD screen), which indicates that the selectable keys and screen may be combined as part of the same unit, such as in an LCD touch screen.

Third, Defendants’ argument that LGE’s proposed claim construction would not be enabled is wrong because the use of touch screen, liquid crystal displays was well known at the time the ’418 patent was filed. This is demonstrated, at least, by the patents cited on the face of the ’418 patent. For example, United States Patent No. 5,914,707 (Ex. 8) discloses the use of keys on a touch screen LCD in a portable audio/display electronic device as clearly described in its specification (Col. 8:39-45) and shown in its Figures 1 & 10. *See also generally* U.S. Patent

No. 5,749,908 to Snell, Col. 5:56 (disclosing use of soft keys on LCD touch screen) (Ex. 9). The specification of the '707 patent makes clear that using such input keys on a touch screen are a known alternative to the use of hard buttons separate from the LCD.<sup>5</sup>

## 2. Disputed Claim Term #2: “selectable key” (claims 5, 6 & 9)

LGE's Construction	Defs.' Original Construction	Defs.' <i>Changed</i> Construction
“A [key] capable of being pressed by a user to cause the action represented by the button or marked area”	“A [key] that is capable of being pressed by a user”	“A [key] <sup>6</sup> that is capable of being pressed by a user”

Defendants state “[s]imply put, a ‘selectable key’ is a key that can be pressed by a user...” Defs.’ Br. at 27. For this aspect of the claim construction, LGE and Defendants are in agreement. Defendants’ statement here clearly demonstrates the reason it is incorrect to narrow the construction of “key” to exclude “soft” keys as noted above. The specification clearly discloses the use of “selectable keys”—*i.e.*, keys that can be pressed by a user—on LCD displays in several passages. *See, e.g.*, Col. 2:24-25 (“***selectable keys*** of a key input unit on a screen”).<sup>7</sup>

Defendants object to LGE’s inclusion of the phrase “capable of being pressed by a user to cause the action represented by the button or marked area” in the proposed claim construction of “selectable key.” Defs.’ Br. at 27-28. Contrary to Defendants’ argument, LGE’s proposed claim construction does not “contradict the parties’ agreed constructions by making all ‘selectable keys’ necessarily ‘enabled selectable keys’” (*see id.* at 28); rather, LGE’s construction logically

<sup>5</sup> Assuming, *arguendo*, that Defendants can demonstrate that the OSD disclosed in the specification is limited to merely graphical figures on a screen, Defendants would not prevail in any event. The language in the specification shows that OSD is only one example relating to how keys are presented on a screen. *See, e.g.*, Col. 12:55-58 (“...on a display screen ***such as*** an on-screen display (OSD).”)

<sup>6</sup> Because Defendants “clarified” their construction of the disputed claim term “key” by changing it to “a physical, hard button” in their Brief, Defendants’ proposed construction of “selectable key” likewise has been “clarified” so that Defendants’ use of the term “key” should be read to mean “a physical, hard key”—which is improper for at least the reasons set forth in section B(1) above.

<sup>7</sup> *See also* Col. 2:29-30 (same); Col. 11:54-62 (“the enabled ***selectable keys*** are displayed on display unit 17 under the control of display-unit driving device 16”); Col. 12:67-Col. 13:3 (“display 133 may show a keyboard arrangement that visually discriminates among the enabled ***selectable keys*** and the non-enabled ***selectable keys***”).

flows from the agreed constructions of “enabled selectable keys” and “non-enabled selectable keys.” LGE’s construction recognizes that the key merely needs to be *capable* of causing the action represented by the key when pressed depending on whether the key is enabled or disabled, as provided in the agreed constructions.

This is shown, for example, in Column 7 of the ’418 patent which discloses that the “[k]ey input unit 14 is connected to control unit 7 and *provides* control unit 7 with *a signal corresponding to a user selected key.*” Col. 7:34-36. This is also shown in Figure 3B of the ’418 patent, an annotated version of which Defendants provide in their brief (Defs.’ Br. at 28). As seen in Figure 3B to the left, the “selectable key” represents a particular action regardless of whether it is enabled or disabled. For example, the enabled “FF” key represents the action of “fast forward,” and the “NEXT” key still represents the action of “next screen” even though the “NEXT” key is disabled and does not cause the device to skip to the next screen in response to being pushed by the user.

**3. Disputed Claim Term #3: “request for identification of said at least one enabled selectable key” (claims 5 & 9)**

<b>LGE’s Construction</b>	<b>Defs.’ Original Construction</b>	<b>Defs.’ <i>Changed</i> Construction</b>
“An input, separate from the enabled selectable keys, that allows a user to ask for a first visual identification of at least one enabled selectable key under the current operation of the device”	“A user input, separate from the enabled selectable keys, that allows a user to request a search to identify those key(s), that (1) can be pressed by a user, and (2) are already active”	“A user input, separate from the enabled selectable keys, by which a user can request an identification of those key(s), that (1) can be pressed by a user, and (2) are already active”

Defendants offer three arguments against LGE’s proposed construction. First, Defendants criticize LGE’s use of the term “allows” in LGE’s proposed construction. Defs.’ Br. at 29. However, Defendants’ criticism is based on a conjured, vague hypothetical wherein Defendants muse that LGE’s construction permits “perhaps [] some other key” than the input expressly provided in the construction to be the request for identification. *Id.* Clearly, under the plain language of LGE’s construction, the recited “input” is the request for identification.

Moreover, Defendants previously did not have such concerns with the use of the term “input...that allows” because it employed the *very same language* in its own original proposed construction. The alternative language offered by Defendants—namely, “input...by which a user *can* request...”—does nothing to alleviate the hypothetical concerns raised by Defendants against LGE. Such language is merely a distinction without a difference.<sup>8</sup>

Second, Defendants argue that LGE’s construction is flawed because it includes the word “visual” in connection with the word “identification” rather than the word “discrimination.” *Id.* at 29-30. LGE’s construction is correct because it considers the claim term in the context of the asserted claims as a whole. *See Phillips*, 415 F.3d at 1314. Defendants acknowledge that the claims require “visually discriminating” the at least one identified enabled selectable key from a non-enabled selectable key. Defs.’ Br. at 29-30. But such visual discrimination necessarily requires a visual identification of the items that are being visually distinguished. This is simply a logical requirement of the “visually discriminating” claim limitation of the ’418 patent.

Third, Defendants argue that LGE’s construction is flawed because the phrase “under the current operation of the device” is too vague (as to the timing of the limitation). Defs.’ Br. at 30-34. However, LGE’s construction is not vague (it expressly recites the proper timing—*i.e.*, during “current operation”) and is the only proposed construction supported by the intrinsic evidence of the ’418 patent.<sup>9</sup> The weakness of Defendants’ position is shown also by its improper citation to LGE’s Preliminary Infringement Contentions, which are irrelevant as a

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<sup>8</sup> While LGE’s proposed claim construction language “that allows a user to ask for...” is supported, LGE believes that Defendants’ proposed, alternative language “by which a user can request” is a distinction without difference and is willing to incorporate that language into LGE’s construction so that it would read “An input, separate from the enabled selectable keys, *by which a user can request* a first visual identification of at least one enabled selectable key under the current operation of the device.”

<sup>9</sup> *See, e.g.*, Col. 1:50-52 (“For instance, *depending on the current operating state*, the key selected by the user may change between an enabled or disabled state...”); Col. 5:6-8 (“...the *currently-enabled selectable keys* can be recognized under *each respective state*.”); Col. 8:41-43 (“...display unit 23 to display all enabled selectable keys under *the current state*...”).

matter of law, *see Exigent Technology, Inc. v. Atrana Solutions, Inc.*, 442 F.3d 1301, 1309 (Fed. Cir. 2006), and its application of the proposed contentions to certain accused products, which reveals the results-oriented approach Defendants have taken to their proposed claim constructions. *See* Defs.’ Br. at 31 (“LGE’s construction, which impermissibly broadens the claim to cover the aspect of the N.I.C.E. accused products described above.”).

Further, Defendants misconstrue LGE’s construction of “under the current operation of the device” as well as the specification and prosecution history of the ’418 patent. It appears that Defendants are confusing the idea of identifying keys that are “currently enabled” with identifying keys that are “currently displayed.” *See, e.g.*, Defs.’ Br. at 31 (“...product **changes screens...**” and “...causes the **screen to change...**”). It is clear that the claims, specification, and prosecution history<sup>10</sup> of the ’418 patent require an identification of “currently enabled” selectable keys regardless of whether they were displayed by the device prior to the “request for identification.” *See, e.g.*, Col. 8:47-56 (“Such an information acquisition key may be used for identifying the enabled selectable keys **when a new menu** is to be selected...”).

#### 4. Disputed Claim Term #4: “selection display unit” (claim 5)

LGE’s Proposed Construction	Defs.’ Proposed Construction
“A screen on which pressable enabled keys are presented and distinguished visually”	“a unit that shows selections”

It is clear from the language of claim 5 that the “selection” in the “selection display unit” refers exclusively to the selectable keys. *See* Col. 13:48-50 (“a selection display unit to visually discriminate said at least one enabled key from a non-enabled selectable key under control of

<sup>10</sup> Although Defendants’ recitation of selected portions of the prosecution history regarding the Tahara and Jewson references in its Brief is incomplete and excludes additional clarifying remarks made by the applicants, none of the file history (cited or otherwise) contradicts LGE’s proposed construction that in response to the “request for identification,” the device identifies at least one selectable key that is enabled “under the current operation of the device.” Indeed, LGE cited to the applicant’s discussion regarding the Tahara reference in its opening brief. LGE’s Br. at 10. As such, Defendants’ discussion of the prosecution history on pages 32-33 of its Brief is largely irrelevant to the parties’ dispute.



said control unit...”). This is confirmed further in the specification of the ’418 patent. *See, e.g.*, Col. 10:15-17 (“control unit 7 searches the memory for *enabled selection keys* based on the offset information stored in the memory.”) It does not refer to some generic “selections” as indicated by Defendants’ proposed construction. Moreover, according to the plain language of the claims, the “selection display unit” visually discriminates the enabled selectable keys from the non-enabled selectable keys (*see* Col. 13:48-50), which Defendants’ overly broad construction does not address. In contrast, LGE’s construction reflects the meaning of the term in context of claim 5 of the ’418 patent.

Defendants argue that LGE’s proposed construction is incorrect because the selectable keys of the “key input unit” must be “separate and distinct” from the screen of the “display unit.” Defs.’ Br. at 34-35. For support, Defendants point to Figures 4 and 5 of the ’418 patent. *Id.* However, as discussed above, Figures 4 and 5 actually show exactly the opposite situation—namely, that the selectable keys and the display unit are contained in the same input mechanism, as represented by the dashed-lined box in each Figure.

Defendants also argue that LGE’s construction is wrong because it would exclude the embodiments shown in Figures 13A and 13B of the ’418 patent. *Id.* at 35. This argument is incorrect as well. It is axiomatic that different claims can be written to cover different scopes of the invention. *See Intamin Ltd. v. Magnetar Technologies, Corp.*, 483 F.3d 1328, 1337 (Fed. Cir. 2007) (“A patentee may draft different claims to cover different embodiments.”). The ’418 patent specification discloses three different ways the control unit could visually discriminate enabled from non-enabled selectable keys, only one of which (Fig. 13C) includes the use of selectable keys on a display screen. *See, e.g.*, Col. 2:12-43; Col. 12:47-Col. 13:3; Figures 13A-

C. Claim 1 of the '418 patent covers the apparatus shown in Figures 13A & 13B, while claim 5 (the only apparatus claim with the “selection display unit” term) covers Figure 13C.

**5. Disputed Claim Term #5: “visually discriminate said at least one enabled key from a non-enabled selectable key . . . based on said identification and in response to said request for identification” (claims 5 & 9)**

LGE’s Proposed Construction	Defs.’ Proposed Construction
“Visually distinguish at least one enabled selectable key from at least one non-enabled selectable key in response to the request for identification from the user”	“At the time of the request for identification, the key(s) that are at that time already selectable and enabled, are visually distinguished from the key(s) that are, at that same time, selectable but non-enabled”

Oddly, Defendants freely admit that they are disputing this language in light of LGE’s Preliminary Infringement Contentions (*see* Defs.’ Br. at 36 n.21) but that is irrelevant as a matter of law. *Exigent Technology*, 442 F.3d 1309. Even without such an admission, the Defendants’ litigation-fueled motive is clear from the number of times they repeat variations of the phrase “at the time” in their proposed construction of this claim term.

Defendants’ misunderstanding about the distinction between selectable keys that are *identified as currently enabled* and selectable keys that are *currently displayed* under the device’s present state of operation, which was discussed earlier with respect to disputed claim term #3, has crept into their proposed construction of this disputed claim term. Defendants argue that this disputed claim term “was specifically defined to require that the key(s) that are visually distinguished as enabled/non-enabled are the *same key(s)* that existed in the *same state(s)* of enablement/non-enablement at the time the request for identification was made by the user.” Defs.’ Br. at 36 (emphasis in original). This is wrong. The patent and prosecution history, including the portion cited by Defendants in their Brief, instead show that (using Defendants’ terminology) the key(s) that are visually distinguished as enabled/non-enabled in response to a user’s request for identification *based on the state(s) of enablement/non-enablement when the request for identification was made*, not on whether they were displayed by the device prior to

the “request for identification.” *See, e.g.*, Col. 8:47-56 (“Such an information acquisition key may be used for identifying the enabled selectable keys *when a new menu* is to be selected...”).

The prosecution history cited by Defendants is consistent with LGE’s proposed construction of this disputed claim term. For example, Defendants argue that LGE distinguished the Jewson reference by arguing that Jewson did not visually discriminate “in response to any type of user input” or “based on user input” (Defs.’ Br. at 37 (citing Ex. 7 to Defs.’ Br. at HCX AS 016381-82)), and that the Examiner stated in the Reasons for Allowance that “Jewson et al...do not visually discriminate in response to request for identification.” *Id.* at 38 (citing to Ex. 7 to Defs.’ Br. at HCX AS 016419). All of these aspects are expressly represented in the “in response to the request for identification from the user” language of LGE’s proposed construction. Thus, Defendants are incorrect to claim that LGE’s construction “ignores the specification and prosecution history in an attempt to cover the accused devices.” *Id.* at 36 n.21. Indeed, as shown above, Defendants’ construction is improper because it seeks to import additional limitations not present in the claim language (or even the specification).

#### 6. Disputed Claim Term #6: “offset information” (claim 6)

LGE’s Proposed Construction	Defs.’ Proposed Construction
“A value or index identifying the position in a memory or other predetermined information area of data used to identify all available selectable keys under current operation of the device” <sup>11</sup>	“Any indication, index, or value that indicates a position or status”

As acknowledged by Defendants, the parties are in partial agreement over the construction of “offset information.” Defs.’ Br. at 39. LGE does not disagree that the phrase “offset information” must encompass offset addresses and offset flags as set forth in dependent

<sup>11</sup> In order to address Defendants’ criticism that the order in which the terms “index” and “value” were presented in LGE’s original proposed claim construction renders claim 8 “nonsensical” (*see* Defs.’ Br. at 39), LGE switched the order of those words so that its proposed claim construction now reads “A value or index identifying the position...” instead of “An index or value identifying the position...” As shown in this section, this change does not alter the scope of LGE’s claim construction but it does dispatch with Defendants’ criticism.

claims 7 and 8 and the specification of the '418 patent—indeed, LGE's construction is based on this very premise and directly supported by the specification. *See, e.g.*, Col. 9:52-53 (“control unit 7 searches for enabled selectable keys using the offset information stored in the memory”).

LGE's construction more closely tracks the disclosure in the specification for the term “offset information” (*see* Col. 4:46-54; Col. 5:2-8; Figure 3B ) and is superior to the broad language included in Defendants' proposed construction. For example, Defendants' proposed construction can be read to cover “any indication...that indicates a position or status.” This is so broad as to be meaningless and would fail to provide the jury with any real guidance about the meaning of the term “offset information.” Moreover, the meaning of the term “status” in Defendants' proposed construction is vague.

Defendants criticize LGE's original proposed construction of “offset information” as failing to properly include the concept of “offset flags.” Defs.' Br. at 39. LGE disagrees, but to negate Defendants' criticism, LGE has simply juxtaposed the terms “index” and “value” in its proposed construction. Thus, LGE's proposed construction includes “a value...in a memory or other predetermined information area of data used to identify all available selectable keys...”—*i.e.*, offset flags—and an “index identifying the position in a memory or other predetermined information area of data used to identify all available selectable keys...”—*i.e.*, offset addresses. Such a construction is consistent with the disclosure of “offset flags” and “offset addresses” in the specification.

#### 7. Disputed Claim Term #7: “disc” (claim 6)

LGE's Proposed Construction	Defs.' Proposed Construction
“A medium to store information used in computers and electronic devices”	“Optical disc including CD, VCD, and DVD”

Defendants impermissibly attempt to narrow their claim construction of the term “disc” to an embodiment disclosed in the '418 patent. Defendants begin by wrongly asserting “[t]o

those of skill in the art, the term ‘disc’ (with a ‘c’) refers to optical discs, whereas the term ‘disk’ (with a ‘k’) refers to other types of electronic storage media, including non-optical storage.”

Defs.’ Br. at 41. In support, Defendants cite to two Internet web pages written approximately *a decade* after the ’418 patent was filed.<sup>12</sup> In addition to being incorrect, the extensive period of time between these web pages and the 1997 filing date of the ’418 patent diminishes any ability to describe the state of the art at the time the patent was filed; thus, making them irrelevant to claim construction. *Plant Genetic Systems, N.V. v. DeKalb Genetics Corp.*, 315 F.3d at 1346 .

However, a review of extrinsic evidence from the time period before and extending up to the 1997 filing date of the ’418 patent reveals that the term “disc” was used regularly to describe many types of electronic storage, including non-optical storage. For example, U.S. Patent No. 5,835,300 assigned to Seagate Technology, Inc.<sup>13</sup> and filed on January 30, 1997 states:

Modern **hard disc drives** comprise one or more rigid **discs that are coated with a magnetizable medium** and mounted on the hub of a spindle motor for rotation at a constant high speed. **Information is stored on the discs** in a plurality of nominally concentric circular tracks by an array of heads mounted to a radial actuator for movement of the heads relative to the discs.

’300 patent, Col. 1:19-25, Ex. 10; *see also* U.S. Patent No. 6,028,725, Col. 1:14-19 (assigned to EMC Corp. and filed on November 7, 1997), Ex. 11; U.S. Patent No. 5,914,833, Col. 1:6-13 (assigned to Sony Corporation and claiming priority to a filing date of March 7, 1995), Ex. 12.

Moreover, these earlier references also disclose the use of offset information, such as offset addresses, with magnetic disc storage systems. For example, in U.S. Patent No. 5,257,149 assigned to Seagate Technology, Inc. and filed on February 13, 1991 (“the ’149 patent”), the

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<sup>12</sup> The Wiktionary/Wikipedia web page indicates that it was last modified on April 27, 2008 (*see* Ex. 9 to Defs.’ Br at 5), and the Apple web page indicates that it was last modified on August 15, 2005 (*see* Ex. 10 to Defs.’ Br. at 2). The ’418 patent was filed in 1997, approximately a decade before.

<sup>13</sup> Seagate Technology, Inc., which has shipped more than 1 billion hard drives since it was formed in 1979. *See* April 22, 2008, Press Release at <http://www.seagate.com>. A search on the USPTO’s website reveals that Seagate alone was awarded at least 18 patents with the phrase “hard disc drive” and at least 160 patents with the phrase “disc drive” in their titles based on applications filed between 1992 and 1997.

applicant describes the invention as an “offset address field in a *magnetic disc storage system* which uses a dual gap head and a rotary actuator.” Abstract, Ex. 13. The number of such exemplary references are legion.

Defendants cites to several passages in the specification of the '418 patent that include the phrase “optical disc” to support its proposed construction. Defs.’ Br. at 41-42. As an initial matter however, only one of the citations, Col. 2:58-59, corresponds to the actual claim term “disc,” and that passage clearly notes with the “*e.g.*” notation that the identified DVD is merely one example of a disc. The remaining citations relate to examples of prior art (*e.g.*, Col. 1:17-23; Col. 1:29-38; Figures 3A & 3B), general descriptions of technology (*e.g.*, Figure 1 [Col. 6:15-16]), or specific embodiments disclosed in the specification (*e.g.*, Col. 4:42-44 (“Reference will now be made in detail to the preferred embodiments...” [Col. 4:23-25]; Figures 4 & 5 (“The preferred embodiment of the present invention will now be described...” [Col. 7:16-20]))—none of which support limiting the term “disc” in claim 6 of the patent to an “optical disc including CD, VCD, and DVD” as Defendants tries to do.

As Defendants point out in their Brief, the specification includes the term “optical disc” several times; thus, the drafters of the '418 patent were aware of the phrase but used the broader language “disc” in claim 6 instead. The context of the claim language of claim 6 reveals at least one reason why the broader construction is correct. *See Phillips*, at 415 F.3d at 1313. The phrase “disc” only appears in dependent claims 2, 6, 10, and 14, and only in connection with the term “offset information.” Specifically, each of these claims recites that “said controller reads an offset information from a disc.” The specification repeatedly discloses that the offset information is stored in “the memory,” not on an optical disc as would be required by Defendants’ construction. *See, e.g.*, Col. 7:39-40 (“...offset value stored in the predetermined

information area *of the memory*...”); Col. 8:19-20 (“...the offset information stored *in the memory*”); Col. 8:38 (same); Col. 9:23, 45-46 & 53 (same); Col. 10:16-17, 39 & 50 (same); Col. 11:57 (same); Col. 12:11-12 (same). Because “disc” can mean either “a magnetic recording medium or an optical recording medium”<sup>14</sup> and the claim language does not use the more narrow phrase “optical disc,” it would be improper to allow Defendants to read in this limitation.

## II. U.S. Patent No. 7,158,456

### A. Overview of the ’456 Patent

Defendants’ feign confusion and assert that the ’456 patent is “vague, internally inconsistent, and at times incomprehensible.” Defs.’ Br. at 60. One reason for their confusion, they assert, is because the ’456 patent claims priority to four Korean patent applications. *Id.* As Defendants undoubtedly understand, the Manual for Patent Examining Procedure (MPEP) provides that “a nonprovisional application may claim the benefit of the filing date of *one or more prior foreign applications* under the conditions specified in 35 U.S.C. 119(a) through (d) and (f), 172, and 365(a) and (b).” MPEP § 1.55(a). The ’456 patent is not defective merely because it claims priority to four related Korean applications.<sup>15</sup>

Defendants posit that because MP3 players existed at the effective filing date of the ’456 patent application, this somehow impacts how the Court should construe the claims. Defs.’ Br. at 61. LGE does not claim here that it invented the MP3 player. In fact, the “Background of the Invention” section of the specification of the ’456 patent acknowledges that MP3 players were in

<sup>14</sup> See, e.g., the ’725 patent, Col. 1:14-19, Ex. 11 (discussed *supra*).

<sup>15</sup> In fact, if the Defendants’ contention that a U.S. patent is defective for claiming priority to several foreign applications is true, then many of the Defendants’ own patents are defective. For example, U.S. Patent No. 4,228,359, assigned to Hitachi, Ltd., claims priority to no less than twelve Japanese applications, U.S. Patent No. 4,779,430, also assigned to Hitachi, Ltd., claims priority to nine Japanese applications, and U.S. Patent No. 4,880,474, also assigned to Hitachi, Ltd., claims priority to seven Japanese applications. See Exs. 14-16.

existence. It is the combination of claimed elements that defines the invention. This novel combination was thoroughly examined by the Patent Office and correctly deemed patentable.

And contrary to the tale concocted by Defendants, LGE did not disavow or otherwise narrow the scope of the disputed terms during the prosecution of the '456 patent. As explained below, Defendants resort to extracting and rearranging various amendments and statements made by both the applicants and the examiner to support its strained arguments. Examining the prosecution history in its entirety, divorced from Defendants' mischaracterizations, reveals that no such disavowal occurred.

## **B. '456 Disputed Claim Terms**

### **1. Disputed Claim Term #1: "attribute information" (claim 17)**

<b>LGE's Construction</b>	<b>Defs.' Construction</b>	<b>Defs.' <i>Changed</i> Construction</b>
"Information (for example extension information) sufficient to differentiate between different types of audio information."	"This term refers to the characters at the end of the file name after [the] period, which identify the type of file."	"Information including a filename extension that is used to differentiate between different types of audio information."

Defendants' changed construction of "attribute information," although facially similar to LGE's, is a subtle attempt by Defendants to improperly limit the scope of the claims. In essence, Defendants ask the Court to find that the "extension information," which everyone agrees is included within the "attribute information" of the audio file, must be used to establish a "reproducing mode." The claims are not so limited.

A plain reading of claim 17 reveals that the method comprises "reading an attribute information associated with an audio file," "establishing a reproducing mode" based on that information, and *then*, if the "extension information" is "mp3," obtaining "header information" to further examine the audio file. There is nothing in claim 17 that requires using only "extension information" to "establish a reproducing mode." To be sure, the "extension information" recited in claim 17 is used to determine whether to further analyze the audio file to



decide if it constructs normal MP3 audio data, but that is a step in the method claim that need not be part of the establishment of the reproducing mode. The claim language is clear on this point.

Other claims of the '456 patent lend further support. For example, to “establish the reproducing mode” based solely on the “extension information” is a feature very explicitly claimed in other claims. Claim 20 recites “a first controller for establishing a reproducing mode for reproducing the audio file *based on extension information*.” Col. 12:54-56. No such limitation is recited in independent claim 17 and the Court should not accept Defendants’ invitation to import such a limitation into claim 17.

The prosecution history of the '456 patent does not help Defendants.<sup>16</sup> For the most part, Defendants do not rely on the prosecution history of the patent at issue and the claims under consideration here. Rather, Defendants point to ambiguous statements during the prosecution of the parent of the '456 patent -- the '376 patent -- cropping amendments made to different claims in an effort to support their reading of the history. *See, e.g.*, Response to Office Action dated September 22, 2004, at Defs.’ Ex. 28, doc. 51-3, pg. 53. Nothing in these amendments or statements relating to the Park reference (Defs.’ Br. at 69) represents a clear disavowal of claim scope limiting the claims to require that “extension information” included in the “attribute information” must be used to establish the “reproducing mode.” The claim language recited in the pending claims of the '376 patent is different than the language recited in the '456 patent and

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<sup>16</sup> Initially, while the prosecution history is important in the claim construction process, “because the prosecution history represents an ongoing negotiation between the PTO and the applicant rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes.” *Phillips*, 415 F.3d at 1317. Indeed, “[i]t is inappropriate to limit a broad definition of a claim term based on prosecution history that is itself ambiguous.” *Inverness Med. Switz. GmbH v. Warner Lambert Co.*, 309 F.3d 1373, 1382 (Fed. Cir. 2003), *see also Innova/Pure Water, Inc. v. Safari Water Filtration Sys, Inc.* 381 F.3d 1111, 1122-23 (Fed. Cir. 2004) (refusing to limit claim construction because statements during prosecution did not “clearly and unambiguously disavow mechanical connections”).

statements distinguishing these terms should have no impact on the scope of different terms appearing in a different patent. *Micro Chem., Inc. v. Great Plains Chem. Co., Inc.*, 194 F.3d 1250, 1260-61 (Fed. Cir. 1999). Applicants distinguished the Park reference by arguing that Park does not disclose “obtaining attribute information of an audio file using an extension of the audio file from management information in a storage medium.” Response to Office Action dated September 22, 2004, at Defs.’ Ex. 28, doc. 51-3, pg. 65. However, neither “management information” nor “a storage medium” are recited in any of the claims of the ’456 patent.

Similarly, amendments to the claims and statements made during the prosecution of the ’456 patent do not justify the narrow construction Defendants proffer. Applicants distinguished the Lee reference by explaining that it does not disclose “using a file extension *to determine whether the file is an ordinary CD file or an MP3 file.*” Response to Office Action at LG A-V 000834, Ex. 17. This distinction relates to determining whether the audio file is an MP3 file after the “reproducing mode” has already been established, not to “establishing a reproducing mode.” Furthermore, arguments made distinguishing the Lee reference were in association with then pending claims 1 and 13, which recited “establishing a reproducing mode for reproducing the audio file *based on the extension information,*” a limitation recited in independent claim 20, but not in independent claim 17.

## 2. Disputed Claim Term #2: “audio file”

LGE’s Construction	Defs.’ Construction	Defs.’ <i>Changed Construction</i>
“A file having audio data.”	A “wav” sound data file. The term “audio file” does not include an MP3 file.	A “wav” file. The term “audio file” does not include a MP3 file.

To begin with, Defendants do not even pretend to assert that the ordinary meaning of the words “audio file” somehow limit the claim to a “wav” file. Indeed, Defendants acknowledge that the claims “treat ‘audio file’ as a generic genus of sound files, and MP3 and WAV files as

the species within that genus.” Defs.’ Br. at 62. The language of claim 17 mandates such a conclusion: “[a] method of reproducing *audio data*, the method comprising the steps of . . . deciding whether the *audio file* constructs normal MP3 *audio data*.” Col. 12:26-40; *see also* Claim 2 (specifying audio file as MP3).

Defendants’ argument rests on an attempt to read carefully selected recitations from the specification into the definition. But it is abundantly clear that the specification of the ’456 patent does not demonstrate an intent by the patentee to deviate from the ordinary meaning of the term “audio file” and contains no words or expressions of manifest exclusion or restriction representing a clear disavowal of claim scope. *Mars, Inc. v. H.J. Heinz Co., L.P.*, 377 F.3d 1369, 1375 (Fed. Cir. 2004) (a “clear definition” is required by Federal Circuit precedent to show that the patentee has acted as a lexicographer in redefining a claim term). None of the portions of the specification relied upon by Defendants state that an “audio file” cannot include MP3 formatted audio data.

Defendants’ reliance on the prosecution history of the parent ’376 patent is equally unavailing and in fact demonstrates the propriety of LGE’s construction. Defendants cite to originally filed claims 7 and 8 of the ’376 patent application but fail to refer to a Reply to an Office Action in which the applicants amended claim 7 to recite “wherein if the extension of the *audio file* is ‘mp3’, the step (b) discriminates the audio file as an *MP3 audio file*” and amended claim 8 to recite “wherein if the extension of the *audio file* is ‘wav’, the step (b) discriminates the audio file as a *CD audio file*.” Response to Office Action dated September 22, 2004, at Defs.’ Ex. 28, doc. 51-3, pg. 55. Clearly, the term “audio file” was intended to encompass MP3 files and the Patent Office, and the public, were informed of this fact.

**3. Disputed Claim Term #3: “extension of audio file”/“extension information”**

<b>LGE's Construction</b>	<b>Defs.' Construction</b>	<b>Defs.' <i>Changed</i> Construction</b>
"Information that indicates the type of audio file but does not dictate the format of the audio file."	"These terms refer to the characters at the end of the file name after period, which identify the type of file."	"These terms each refer to a filename extension – the characters at the end of a file name after the period, which identify the file type."

The dispute surrounding the construction of this claim term pertains to explaining to the jury that the filename extension does not dictate the contents of the audio file, but rather simply identifies its contents. Defendants cite to the prosecution history in support of their claim construction (Defs.' Br. at 66), but Defendants crop out the most significant portion of the arguments made to the Examiner. The applicants explained that "[s]ince Lee does not necessarily use a file extension *to determine whether the file is an ordinary CD file or an MP3 file*, the feature of *using the file extension to determine whether the file is an ordinary CD file or an MP3 file* is not inherently disclosed in Lee." Response to Office Action at LG A-V 000834, Ex. 17. In any event, the statements were made to distinguish then pending claim 1 which evolved into claim 20—these statements were not used to distinguish Lee from the invention recited in claim 17 and therefore do not affect its interpretation. *Golight Inc. v. Wal-Mart Stores Inc.*, 355 F.3d 1327, 1333 (Fed. Cir. 2004). Thus, the claim requires further examination of the audio file to determine whether the audio file constructs normal MP3 audio data or not, and thus the concept "but does not dictate the format of the audio file" is captured elsewhere in the claim.

#### **4. Disputed Claim Term #4: "reproducing mode"**

<b>LGE's Construction</b>	<b>Defs.' Construction</b>	<b>Defs.' <i>Changed</i> Construction</b>
"A mode for producing an audible representation of the audio file."	"Reproducing mode" refers to "MP3 on Mode" and "MP3 off Mode." "MP3 on Mode" means a mode in which MP3s will be played from a medium that contains both MP3s and non-MP3s. "MP3 off Mode" means a mode in which MP3s will not be played from a medium that contains both MP3s and non-MP3s.	"A mode in which one type of supported sound file ( <i>e.g.</i> , MP3 file) is played and another type of supported sound file ( <i>e.g.</i> , WAV file) is not played when both types of sound files are stored on the same medium."

Defendants are quite blunt about their methodology here – they seek to limit the very clear and unambiguous language “reproducing mode” to a precise embodiment disclosed in the specification. Defs.’ Br. at 71 (“the term ‘reproducing mode’ should be limited to the teachings of the specification”). So the debate becomes rather straightforward: should the Court, despite the clear and broad language used in the claims, limit the claims to preferred embodiments in the specification?

The claim language broadly recites the establishment of “a reproducing mode in response to the type of audio file.” The clear and unambiguous language merely connects the mode of reproduction to the type of audio file—it certainly does not require an “MP3 on Mode” or an “MP3 off Mode” (old construction), or that different types of sound files be stored in the same medium (changed construction). While it is true that the specification discloses as an embodiment an MP3 on Mode and an MP3 off Mode, the Federal Circuit has outright rejected the notion that disclosure of even just one embodiment necessarily limits the claims. *See, e.g., Northrop Grumman Corp. v. Intel Corp.*, 325 F.3d 1346, 1355 (Fed. Cir. 2003) (citing *Teleflex, Inc. v. Ficosa North Amer. Corp.*, 299 F.3d 1313, 1327 (Fed. Cir. 2002)). “Absent a clear disclaimer of particular subject matter, the fact that the inventor anticipated that the invention may be used in a particular manner does not limit the scope to that narrow context.” *Brookhill-Wilk 1, LLC v. Intuitive Surgical, Inc.*, 334 F.3d 1294, 1301 (Fed. Cir. 2003); *see also Innova*, 381 F.3d at 1117 (“even where a patent describes only a single embodiment, claims will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using ‘words or expressions of manifest exclusion or restriction.’”); *Phillips*, 415 F.3d at 1324.

The specification of the ’456 patent contains no words or expressions of manifest exclusion or restriction evidencing a clear intention to limit the claimed invention to only “a

mode in which one type of supported sound file (*e.g.*, MP3 file) is played and another type of supported sound file (*e.g.*, WAV file) is not played when both types of sound files are stored on the same medium.” In fact, the “Summary of the Invention” section of the specification does not even mention this “MP3 On” mode or an “MP3 Off” mode.

Other claims recited in the ’456 patent further demonstrate that the “reproducing mode” should not be narrowly construed. In defining the term “reproducing mode” in claim 10, for example, to be a “mode for decoding the audio file,” the patent clearly demonstrates the breadth of the term and it should not be limited as Defendants urge. That is also true for asserted dependent claim 22. Thus, the claims should not be limited to a mode in which one type of supported sound file is played and another type of supported sound file is not played when both types of sound files are stored on the same medium.

The prosecution history of the parent ’376 patent does not support Defendants’ vigorous attempt to wholly limit the claims to just two modes (original construction) or modes relating to “types of sound files [] stored on the same medium.” At bottom, Defendants resort to dissecting the prior art Park and Hayashi references and rely on their own interpretation of these references—not arguments made by the applicants or statements by the Examiner—to support their strained construction. That is an irrelevant analysis. *See Innova*, 381 F.3d at 1124 (“It is well settled, however, that it is the applicant, not the examiner, who must give up or disclaim subject matter that would otherwise fall within the scope of the claims.”)

In any event, there is nothing in the amendments even remotely supporting Defendants’ interpretation that applicants disavowed “reproducing modes” other than the “MP3 On” and “MP3 Off” modes disclosed in the specification as preferred embodiments.<sup>17</sup> Defendants’

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<sup>17</sup> Moreover, Defendants’ reliance on *LG Electronics, Inc. v. Bizcom Electronics, Inc.*, 453 F.3d 1364 (Fed. Cir. 2006), *reversed on other grounds*, *Quanta Computer, Inc. v. LG Electronics, Inc.*, \_\_ U.S. \_\_ (2008),

prosecution history “summaries” are simply the piecing together of various sections of the prosecution history and combining portions of statements by the examiner as a basis for a rejection with statements made by the examiner describing prior art not relied upon as a basis for rejection. Defendants’ “summaries” should be swiftly disregarded by the Court.

**5. Disputed Claim Term #5: “establishing a reproducing mode in response to the type of the audio file as a result of the step (b) [*sic*]”**

<b>LGE’s Construction</b>	<b>Defs.’ Construction</b>	<b>Defs.’ <i>Changed</i> Construction</b>
“Automatically establishing a mode for playing the specific audio file based on the result of step (a).”	Defendants contend that no further construction of this phrase is needed, beyond the constructions already provided for certain terms found within the clause, such as “reproducing mode” and “audio file.”	Defendants contend that no further construction of this phrase is needed, beyond the constructions already provided for certain terms found within the clause, such as “reproducing mode” and “audio file.” To the extent this phrase needs to be construed, Defendants propose “(b) establishing a reproducing mode based on the extension of the audio file read in step (b).”

While Defendants’ construction here appears at first glance to be rather innocuous, consideration must be made of the disputed claim terms already considered that are contained within this phrase. Using Defendants proffered construction for “audio file” in the claims, the Court would instruct the jury of the following: “establishing a reproducing mode based on the extension of [a **“wav” file, which does not include a MP3 file**], read in step (b),” “wherein if an extension of [the **“wav” file, which does not include a MP3 file**], is ‘mp3’ as a result of step (b), further comprising the steps of . . . deciding whether [the **“wav” file, which does not include a MP3 file**], constructs normal MP3 audio data” *See* Claim 17. This makes no sense at

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(Defs.’ Br. at 72) for the wholesale proposition that the prior art limits the scope of claim terms is misplaced. There, the patentee incorporated by reference an *industry standard* in the specification, which *explicitly defined the exact claim term* at issue. *Id.* at 1374. Here, the term “reproducing mode” was not defined in the Park reference and Defendants’ litigation inspired interpretation of this reference has no bearing whatsoever on the construction of the term “reproducing mode.” In fact, “[p]rosecution disclaimer does not [even] apply [] if the *applicant* simply describes features of the prior art and does not distinguish the claimed invention based on those features.” *Computer Docking Station Corp. v. Dell, Inc.*, 2007-1169, -1316 at 11 (Fed. Cir. March 21, 2008). Applicants did not describe the features of the Park reference or distinguish the claimed invention based on those features as urged by Defendants.

all. Defendants' proffered construction is simply unworkable and contrary to the language of the claims. In addition, it is clear that the second occurrence of "(b)" in this element should be "(a)," and the Court should construe the claim as such.

**6. Disputed Claim Term #6: "audio file constructs normal mp3 audio data"/"audio file constructs a normal mp3 format stream"**

<b>LGE's Construction</b>	<b>Defs.' Construction</b>
"The audio file comprises audio data conforming to standard Layer 3 digital audio compression algorithms developed by the Moving Picture Experts Group (MPEG)"	"Conforms to the MPEG1 Layer 3 digital audio compression standard developed by the Moving Picture Experts Group."

Defendants just ignore the limitation that the header information "*of the audio file*" be examined to determine whether the data contained in the audio file is formatted according to MP3 standards. Again, if the Court were to use Defendants' construction of "audio file" here, the result would be nonsensical: "deciding whether [the '**wav file**', which does not include a **MP3 file**], conforms to the MP3 standard." The Court should not adopt such a nonsensical construction.

**7. Disputed Claim Term #7: "header information"**

<b>LGE's Construction</b>	<b>Defs.' Construction</b>
"Digital data that represents the contents of an audio file."	"A bit sequence preceding the sound data that identifies the sound data."

Defendants ask the Court to limit "header information" to only a bit sequence preceding the sound data, relying on the fact that an MP3 file contains a header comprised of a bit sequence. Defs.' Br. at 76. Defendants' proposal is inconsistent with the claims and specification. For example, in describing a preferred embodiment, the specification discloses that "the disc discrimination section 102 discriminates the file or music as the general text data file or music, *if the header information of the file or music recorded onto the disc does not include the normal MP3 stream.*" Col. 5:24-27. The "header information" may comprise something other than merely MP3 header information if it is to include something other than the



“normal MP3 stream.” Similarly, Figure 3 illustrates that the “header information” comprises more than merely a bit sequence associated with an MP3 file. If the “header information” does not include a normal MP3 stream, the “header information” is determined to be associated with a text data file. Again, although the “header information” may include a bit sequence associated with an MP3 file, it is not required to include this information—if it does not, based on the “header information,” the audio file is deemed to be something other than an MP3 file.

Moreover, Defendants’ proposed construction of “header information” is inconsistent with its construction of “audio file.” For example, claim 23 recites: “The apparatus of claim 20, wherein the part of the audio file is a part of a header in the audio file.” Col. 13:1-2. Defendants ask the Court to limit “header information” to a bit sequence preceding the sound data based on the MP3 standard, but also ask the Court to find that “audio file” is a “WAV” file and cannot include an MP3 file. In other words, Defendants ask the Court to construe the claims to recite that the part of a WAV file is a part of a bit sequence of an MP3 file in the WAV file. This convoluted logic should not be followed by the Court.

**8. Disputed Claim Term #8: “audio file is not available under the established reproducing mode”**

LGE incorporates by reference its arguments set forth in its Opening Claim Construction.

**III. U.S. PATENT NO. 6,721,709**

**A. Overview of the ’709 Patent**

Defendants spend many words and pages criticizing the “purported invention” of the ’709 patent as being obsolete and focusing on some features and objectives of the “purported invention” set forth in the embodiments of the patent. Defs.’ Br. at 42-46. But all this is simply a diversion. It is axiomatic that the *claims* define the invention. *See Phillips*, 415 F.3d at 1312; *see also Johnson & Johnston Associates Inc. v. R.E. Service Co., Inc.* 285 F.3d 1046,

1052 (Fed. Cir. 2002) (“the claims, not the specification, provide the measure of the patentee’s right to exclude”). The claims of the ’709 patent are directed to a data reproducing device for reproducing audio files compressed at different rates. To be sure, the specification discloses more than that, including the feature of storing data in an idle area of a digital storage medium. The phrase “idle area,” however, never appears in the claims, and the claims as examined and allowed by the Patent Office are directed to other features of the invention. Certainly there is no requirement in the patent laws that a patentee claim all inventive aspects of the described embodiments or claim all objectives and advantages. *See id.* The Court should dismiss Defendants’ misdirection and focus on the claims, which are, after all, what define the “purported invention.”

## **B. ’709 Disputed Claim Terms**

### **1. Disputed Claim Term #1: “audio data is associated with text data for reproduction” (claim 1)**

<b>LGE’s Construction</b>	<b>Defs.’ Construction</b>
“Text data is stored in association with audio data and reproduced cooperatively in accordance with that association.”	“Audio data and its related text data are stored in separate regions of a memory, with a header in the audio data that points to the associated text data, the text data being stored in a dedicated, idle region of the memory.”

In contrast to Defendants’ proposal, LGE’s construction is true to the language of the claims and specification as a whole, not limited to one preferred embodiment. Defendants attempt to improperly limit the claims reasoning that certain aspects of the one preferred embodiment represents the “essential element” or “heart of the invention.” Defendants are not bashful in this pursuit, stating that “it is entirely appropriate to limit the scope of a claim to an embodiment described in the specification, if that embodiment practices the essential feature of the invention.” Defs.’ Br. at 48 (citing *MBO Labs., Inc. v. Becton, Dickinson & Co.*, 474 F.3d 1323, 1330 (Fed. Cir. 2007)). However, “[i]t is well settled that ‘there is no legally recognized or protected essential element, gist or heart of the invention in a combination patent.’ ” *Allen Eng’g*

*Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1345 (Fed. Cir. 2006) (quoting *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 345 (1961)). Indeed, the Federal Circuit specifically rejected this argument in *MBO Labs.*, cited by Defendants, stating “[w]e sympathize with the district court’s choice, since we agree that safety at once upon removal from the patient **is an essential element of the invention**.... However, we cannot endorse a construction analysis that does not identify ‘a textual reference in the actual language of the claim with which to associate a proffered claim construction.’” 474 F.3d at 1330-31 (quoting *Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F.3d 985, 990 (Fed. Cir.1999)). Here, there is no reference in the disputed claim language which can be associated with “idle regions of a memory” where “text data” is stored, nor is there any reference associated with reading “header” information. Defendants’ proposed construction incorporates limitations parsed from the specification without reference to the specific claim language.

Defendants attempt to support their “essence of the invention” argument by asserting that without narrowing limitations none of the stated objectives would be satisfied; however, this is neither true nor a correct claim construction application. While **one object** disclosed in the ’709 specification is to provide a digital data player that makes use of the idle area of a digital storage medium, that is not the only objective. See Col. 2:3-64 (discussing a long list of “[t]hese and other objects . . .”). In any event, it is not a requirement that the claimed invention capture every objective disclosed in the specification. See *Johnson & Johnston*, 285 F.3d at 1052. The fact that a patent asserts that an invention achieves several objectives does not require that each of the claims be construed as limited to structures that are capable of achieving all of the objectives. See *Northrop Grumman Corp.*, 325 F.3d 1355. “Absent a clear disclaimer of particular subject matter, the fact that the inventor may have anticipated that the invention would be used in a

particular way does not mean that the scope of the invention is limited to that context.” *Id.*, at 1355. No such disclaimer was made here.

Finally, relying on a clear misstatement of the law, Defendants contend that LGE’s claim differentiation argument is “wrong.” Specifically, Defendants assert that “[t]his doctrine applies only if ‘the limitation in dispute is the only meaningful difference’ between claims.” Defs.’ Br. at 49 (quoting *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 910 (Fed. Cir. 2004)).

However, the full quotation from *Liebel-Flarsheim* reads: “the presumption that an independent claim does not have a limitation that is introduced for the first time in a dependent claim “*is especially strong*” when the limitation in dispute is the only meaningful difference between an independent and dependent claim, and one party is urging that the limitation in the dependent claim should be read into the independent claim[.]’ ” *Id.* (quoting *Sunrace Roots Enter. Co. v. SRAM Corp.*, 336 F.3d 1298, 1302-03 (Fed. Cir. 2003)). Claim 5, depending from independent claim 1, recites a “read header” and a “data storage medium,” the two additional limitations Defendants seek to add to independent claim 1. Col. 7:41-45. Thus, the presumption is that the term “audio data in association with text data” does not include these additional limitations. Defendants have not rebutted this presumption.

## 2. Disputed Claim Term #2: “first type of audio data” (claim 1)

LGE’s Construction	Defs.’ Construction	Defs.’ <i>Changed Construction</i>
“Digital data comprising formatted audio information (such as MP3 format) where compression rate is one defining factor of the format type.”	“The first type was compressed at a different compression rate than the second type.”	“Digital data comprising formatted audio information where compression rate is one defining factor of the format type.”

## 3. Disputed Claim Term #3: “second type of audio data” (claim 1)

LGE’s Construction	Defs.’ Construction	Defs.’ <i>Changed Construction</i>
Digital data comprising formatted audio information (such as MP3 format) formatted differently than said first type of audio data, where compression rate is one defining	The first type was compressed at a different compression rate than the second type.	“Digital data comprising formatted audio information formatted differently than said first type of audio data, where compression rate is one defining factors in the

factor in the differentiation.		differentiation.”
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Based on Defendants’ changed construction of the disputed claim terms #2 and #3, there is virtually no dispute that remains between the parties. Defendants take issue with LGE’s inclusion of the language “such as MP3 format;” however, this is a non-issue. Defs.’ Br. at 57. Contrary to Defendants’ contention, the inclusion of this exemplary language does not make claim 3 inconsistent with claim 1. Claim 3 is dependent from claim 1. Thus, by virtue of this dependency, claim 3 provides further limitations to claim 1. The fact that claim 3 requires the second decoder to decode speech indicates that the second decoder of claim 1 decodes more than just speech. *See Tandon Corp. v. United States Int’l Trade Comm’n*, 831 F.2d 1017, 1023 (Fed. Cir.1987) (explaining that there is a presumption of difference in scope among claims, but claims may cover the same subject matter in different words). This is classic claim differentiation.

#### 4. Disputed Claim Term #4: “decoder” (claims 1, 2 & 3)

LGE’s Construction	Defs.’ Construction	Defs.’ <i>Changed</i> Construction
“Hardware and/or software that converts a coded signal back to its original digital signal.”	“A device that decompresses data that was compressed by a particular type of encoder.”	“Hardware that converts a coded signal back to its original digital signal.”

Defendants do not, because they cannot, dispute that the ’709 patent specifically contemplates the implementation of a hardware and/or software decoder. The specification is unambiguous on this point. Col. 3:51-54. So to counter that, Defendants revert to convoluted disclaimer arguments in an attempt to improperly limit the decoder to hardware alone. The Court should reject this narrowing limitation.

To begin with, the Federal Circuit has continuously cautioned against interpreting claim terms in a way that excludes embodiments disclosed in the specification. *See, e.g., Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1305 (Fed. Cir.2007) (rejecting proposed claim interpretation that would exclude disclosed examples in the specification); *Invitrogen*

*Corp. v. Biocrest Mfg., L.P.*, 327 F.3d 1364, 1369 (Fed. Cir.2003) (finding district court’s claim construction erroneously excluded an embodiment described in an example in the specification, where the prosecution history showed no such disavowal of claim scope); *see also Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir.1996) (finding that a claim interpretation that excludes a preferred embodiment is “*rarely, if ever, correct*”). In fact, interpreting claims to exclude embodiments of the patent requires the embodiment be clearly and unambiguously disclaimed. *See Seachange Int’l, Inc. v. C-COR Inc.*, 413 F.3d 1361, 1373 (Fed. Cir. 2005) (“A disclaimer must be clear and unambiguous.”).

Here, there is no disclaimer, much less one that is clear and unambiguous. The basis for Defendants’ argument is that because original claim 1 was rejected by the examiner, LGE somehow disclaimed the embodiment shown in Figure 3. This argument is baseless. Defendants have cannot point to any passages in the prosecution history where the patentees unambiguously disclaimed the existence of a single decoder having functionally separate decoding functions. During prosecution, the Examiner rejected several claims as obvious over U.S. Patent No. 6,134,695 (Sasaki), in view of an IEEE signal processing magazine reference (Noll). Sasaki discloses a code image data output apparatus and method and Noll discloses MPEG audio coding. Neither reference discloses a single decoder having functionally separate decoding functions. In the Examiner’s first office action, it was noted that:

Sasaki fails to expressly disclose a separate “decoder.” However, the examiner contends that the concept of providing a decoder for a coding system was well known, as taught be Noll.

In addition, comparing claim 1, the examiner further takes official notice of the fact that it was well known in the art to provide the *separated decoders* with individual decoding function, which has an *equivalent functionality to a decoder with multiple decoding functions* in claim 1, based on the disclosure in the specification. Particularly, *in software/hardware interchangeable implementation*, it is well known that *one module with multiple coding functions is functionally equivalent to multiple modules with individual coding functions*.

First Office Action at LG A-V 000634, 000640, Ex. 18. In response to the Examiner's first rejection, LGE amended claim 1 and remarked:

While not conceding the appropriateness of the rejections, but merely to advance prosecution of the instant application, apparatus claim 1 is amended to recite a digital player having a combination of elements, including a decoder having at least first and second decoding functions...

Sasaki et al. does not teach or suggest a decoder having at least first and second decoding functions...

In rejecting claims 8-13 as being obvious over Sasaki et al. in view of Noll and alleged "well known prior art," official notice is taken that *it is well known in the art to provide separated decoders with individualized decoding function which, the Office Action contends, is equivalent in function to the decoder with multiple decoding functions recited in claim 1.*

While the Office Action cite M.P.E.P. 52144.03 as support for this rejection, Applicants respectfully point out that M.P.E.P. 52143.03 states that to "establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." *Accordingly, the Examiner is courteously requested to supply one or more references that teach or suggest the above-noted features of the presently claimed invention.* It is respectfully submitted that until such references are supplied, the rejection of the, claims based on what is "well known prior art" is improper and should be withdrawn.

Response to Office Action at LG A-V 000650-663, Ex. 18. Then in the second office action, the Examiner rejected amended claim 1 making the exact same (almost verbatim) argument as made in the first office action. *See* Second Office Action dated May 9, 2003, at LG A-V 000671-692, Ex. 18. In response to the Examiner's second rejection, LGE canceled claims 1-8 and added claims 24 and 25, which issued as claims 1 and 7 respectively, and, in doing so, specifically refuted the Examiner's rejection. Response to Office Action dated August 20, 2003, LG A-V 000695, 000703, Ex. 18.

These statements, while describing functionality of single and multiple decoders, do not exclude use of a single decoder having functionally separate decoding functions. Moreover, the Examiner specifically noted the software/hardware interchangeable implementation as proposed by LGE. First Office Action at LG A-V 000640, Ex. 18. Again, just as in the specification, this language evinces the inventors' clear focus on software and hardware to accomplish the decoding functionality.

**5. Disputed Claim Term #5: “the first decoder and the second decoder are functionally separated from each other” (claims 1, 2 & 3)**

<b>LGE’s Construction</b>	<b>Defs.’ Construction</b>
“The first and second decoders perform separate and distinct decoding functions respectively for two different types of audio data.”	“The first decoder and the second decoder perform different decoding functions.”

LGE’s proposal more clearly captures the language and meaning of the claims, particularly the important phrase “functionally separated.” On that point, Defendants once again rely on the “Figure 3 disclaimer argument” in support of their construction, although it is not clear from their argument why the point has any import here. Defs.’ Br. at 58. In any event, as detailed above, the “first decoder” and “second decoder” can comprise hardware and/or software that converts a coded signal back to its original form. The idea of functional separation does not require that the decoders be physically separate as suggested by Defendants.

**6. Disputed Claim Term #6: “a selector, having at least a first output and a second output separated from each other, for selectively directing one of said outputs to the corresponding one of the first decoder and the second decoder” (claims 1, 2 & 3)**

<b>LGE’s Construction</b>	<b>Defs.’ Construction</b>
<p>This element should be construed pursuant to 35 U.S.C. § 112, ¶ 6.</p> <p>The function associated with this means-plus-function element is: “selectively directing one of said outputs to the corresponding one of the first decoder and the second decoder.”</p> <p>The structure disclosed in the specification for performing this function is a processor, such as controller which retrieves formatted data from memory and based on this format, selectively directs the data to a corresponding decoder.</p> <p>The claim further requires that the structure corresponding to the “selector” have at least a first output and a second output separated from each other.</p>	<p>A switch with at least two distinct, physically separate outputs corresponding to two distinct, physically separated decoder circuits, where each output is connected to its corresponding separate decoder circuit.</p>

The divide between the parties here is substantial. Initially, Defendants devote three sentences at the end of their argument to address LGE’s position that this claim term is drafted in means-plus-function form. The means-plus-function issue is a threshold one that the Court must resolve first. At bottom, Defendants argument rests on its assertion that “a selector, an output,



and another output” recites sufficient structure to preclude application of § 112, ¶ 6. Defs.’ Br. at 54. The word under consideration is “selector” and the issue is whether that term connotes “sufficiently definite structure.” *Personalized Media Communications v. International Trade Comm’n*, 161 F.3d 696, 704 (Fed. Cir. 1998); *see also* LGE Opening Br. at 39-40. Defendants refer to nothing that helps them on this point. And the fact that the claim recites outputs to the selector does not remove the claim from the ambit of § 112, ¶ 6. *Laitram Corp. v. Rexnord, Inc.*, 939 F.2d 1533, 1536 (Fed. Cir. 1991); *Nomos Corp. v. Brainlab USA, Inc.*, 357 F.3d 1364, 1368 (Fed. Cir. 2004).<sup>18</sup>

In any event, regardless of whether § 112, ¶ 6 applies here, the claim language is appropriately construed to require a controller under normal principles of claim construction. For their part, Defendants rely primarily on “switch 406” of the specification to support their construction. *See* Defs.’ Br. at 50-51. But that switch is irrelevant. As recited in Claim 1 of the ’709 patent, the “selector” has “a first **output** and a second **output**” and the function of the claimed “selector” is to “selectively direct” one of these first and second outputs “to the corresponding one of the first **decoder** and the second **decoder**.” The switch 406 identified by Defendants has “at least a first and second **input** for said first type of digital data” and its function is for “outputting said first type of digital data received at one of said first and second **inputs** to said **encoder**.” *Id.* at Col. 2:33-37. The “encoder” encodes the audio signal from the A/D converter and provides this encoded data for storage in the data storage medium. *See, e.g.*,

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<sup>18</sup> Moreover, contrary to Defendants’ assertion (Defs.’ Br. at 54), the specification of the ’709 patent discloses an exemplary algorithm to program the controller to selectively direct the outputs to their corresponding decoders. *See* Col. 6:7-29. As clearly disclosed in the specification of the ’709 patent, the controller/selector identifies the stored audio data based on header information and determines the association between different types of audio data and their respective locations in memory based on the address pointers in the header. *Id.* The ’709 patent does not merely disclose a general purpose computer processor as the structure designated to perform the function of “selectively directing.”

Col. 4:23-27; 5:38-44. “*Then*, the stored audio signal is *output under the control of controller 410* along the same path as the speech file.” Col. 5:42-44. Defendants even acknowledge that the “switch” upon which they rely is used only for recording and encoding audio data. *See* Defs.’ Br. at 50, n28. One skilled in the art would understand that the claimed “selector” refers to the element that retrieves the data from memory and sends it to the appropriate decoder, *i.e.*, the controller 410, and not the device that inputs the encoded data in memory, *i.e.*, switch 406.

Defendants resort to extracting a portion of Figure 4 of the ’709 patent, annotating this portion, and implying that this concocted illustration is disclosed in the ’709 patent. Defs.’ Br. at 50-51. Defendants’ doctored “switch 406” completely distorts the teachings of the ’709 patent. *See, e.g.*, Col. 5:18-27. The “input” identified by Defendants is in reality a connection to an A/D converter. The “First Output” is not an output “to Decoder 1,” but rather a connection to microphone 405. The “Second Output” is not an output “to Decoder 2,” but rather a connection to signal processor 404 which processes and reproduces the audio signal from cassette mechanism 403. This “switch” simply transfers signals from a microphone or cassette to an A/D converter, where these signals are subsequently encoded and stored in memory. The claimed “selector” is the structure that subsequently retrieves this information from this memory and selectively directs it to the corresponding decoder. Clearly, reliance on the “switch” which performs the “reverse” function cannot be correct.

Defendants further assert that the “switch” disclosed in the specification selectively directs “physically” separate first and second outputs to two “physically” separate decoder circuits. But Defendants’ assertion ignores the limitation that the “first decoder and the second decoder” are “functionally separated,” rather than physically separated. Defendants’ interpretation reads the term “functionally” out of the phrase “functionally separated,” which is

erroneous. *See, e.g., Innova*, 381 F.3d at 1119 (noting that “[i]n the absence of modifiers, general descriptive terms are typically construed as having their full meaning” and holding improper the reading of “operatively” out of the term “operatively connected”); *Anchor Wall Systems, Inc. v. Rockwood Retaining Walls, Inc.*, 340 F.3d 1298, 1310 (Fed. Cir. 2003) (district court erred when ignoring the term “generally” in “generally parallel”); *Johnson Worldwide*, 175 F.3d at 992 (refusing to import a modifier for the term “coupled”). Moreover, signals that are time division multiplexed are sent to the functionally separated decoder over just one physical line; there is no requirement of two separate physical lines as urged by Defendants.

The term “separated” should be construed to encompass both physical separation as well as functional separation and there is nothing in the claims or specification that mandates otherwise. Defendants’ illustration drawn to bolster their construction showing physically separate outputs and decoders (*see* Defs.’ Br. at 50) is not taken from the ’709 patent and has no relevancy here. *See Voice Technologies Group, Inc. v. VMC Systems, Inc.*, 164 F.3d 605, 611 (Fed. Cir. 999) (excluding non-expert opinion evidence as irrelevant).

Defendants also cite to a definition of the word “selector” found in the *Dictionary of Computing* (4ed 1996), maintaining that this definition reinforces their position that the claimed “selector” is “switch 406” disclosed in the specification. The complete definition of the term “selector” found in this dictionary is reproduced below:

**Selector 1.** A device that can switch a signal path or initiate some other action on receipt of a predetermined signal. The actioning signal can be on the path to be switched or from a separate path.  
**2.** *Short for* selector channel. *See* channel.

This definition does not equate a “selector” with a switch, but rather states that it can be a “device that *can switch*” a signal path. Also, the controller disclosed in the specification is such a device that controls the signal path. Second, the other cross-referenced definition of “channel”

is “[a] specialized processor that comprises an information route and associated circuitry to control input and/or output operations.” *Id.* at 69. This definition aligns with LGE’s construction.<sup>19</sup>

Finally, the prosecution history of the ’709 patent does not support Defendants’ construction. In order for prosecution history disclaimer to attach, Federal Circuit precedent “requires that the alleged disavowing actions or statements made during prosecution be both clear and unmistakable.” *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1324-26 (Fed. Cir. 2003). Nothing in the prosecution history indicates that the applicants amended “controller” to recite “selector” to overcome any prior art or other rejection from the Examiner. If relevant at all, it demonstrates that the applicants believed the two terms to be synonymous.

**7. Disputed Claim Term #7: “decoder decodes speech” (claim 3)**

Defendants have dropped their proposed construction and adopted LGE’s construction of this term. Accordingly, the construction for this term is no longer disputed.

**8. Disputed Claim Term #8: “decoder decodes text” (claim 3)**

Likewise, Defendants’ have acquiesced to LGE’s proposed construction of this term although they hinge this agreement on the construction of disputed claim term #1.

**IV. U.S. PATENT NO. 5,790,096**

**A. Overview of the ’096 Patent**

Defendants attempt to downplay the importance of the inventions disclosed in the ’096 patent by claiming it “is directed at a problem that simply does not exist” today. Defs.’ Br. at 1. To the contrary, the inventions disclosed in the ’096 patent only have increased in importance

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<sup>19</sup> Defendants also erroneously refer to *S3, Inc. v. nVidia Corp.*, 259 F.3d 1364 (Fed. Cir. 2001) for the proposition that a “selector” had a known meaning in the art at the time of the invention. In that case, the claim did not recite a “selector” but rather a “*digital-to-analog converter means . . . for selectively receiving.*” The *parties agreed* that the “selector” explicitly disclosed in the specification of that patent was the corresponding structure. *Id.* Moreover, nothing in the S3 case supports Defendants assertion that the language “selector” should be construed to be a “switch.”

over time as more electronic devices incorporate flat panel display systems that are capable of displaying video signals, and because the inventions in the '096 patent allow these devices to accept and display video signals of many different formats and permit the scaling of video images.

**B. The Disputed Claim Terms of the '096 Patent (claim 21)**

**1. Disputed Claim Term #1: “orientation”**

LGE's Construction	Defs.' Construction
“The extent to which a displayed image is rotated or flipped”	“The state of said video image describing whether it has been rotated 90 degrees, 180 degrees, or mirrored”

Defendants' proposed claim construction is flawed for several reasons. First, it is clear that Defendants are attempting to limit their construction to the disclosed embodiment in the '096 patent. *See* Defs.' Br. at 15 (“Figure 12 of the patent shows only 90 degree, 180 degree, and mirrored orientations”). This is improper because there is no language in claim 21 to limit the term “orientation” in such a way. Indeed, a review of the other claims of the '096 patent confirms this. For example, independent claim 27 recites “orienting said display image” (Col. 34:46), while dependent claim 28 recites “wherein said display image is one or more of an upside down image form, a portrait image form, a mirror-image form, and a rotated image form.” Col. 34:49-51. As such, the “orientation” set forth in independent claim 27 is presumed to be of broader scope than that disclosed in dependent claim 28 (*see Acumed L.L.C. v. Stryker Corp.*, 483 F.3d 800, 806 (Fed. Cir. 2007)), and terms should be construed consistently among the claims. *See Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001). Moreover, Defendants' proposed construction is flawed further because it would exclude one of the forms—namely, the “NORMAL” orientation labeled as Fig. 12a—of the very embodiment that Defendants cite as support. *See MBO Laboratories*, 474 F.3d at 1333.

On the other hand, LGE's proposed construction for "orientation" encompasses the presentation forms shown in Figure 12 (namely 0, 90, 180, and 270 degrees and mirror-image) and comports with the ordinary meaning of the term (*see* LGE's Br. at 45); thus, the Court should adopt LGE's proposed claim construction for this term.

## 2. Disputed Claim Term #2: "video image"

LGE's Construction	Defs.' Original Construction	Defs.' <i>Changed</i> Construction
"Data used to generate a visual representation of a video frame"	"A video frame described by a set of rows and columns"	"A video frame described by a set of rows and columns generated from the video signal" <sup>20</sup>

Defendants' construction of "video image" is based on a misreading of the '096 patent. Defendants assert that the '096 patent "defines a 'video image' as '[a] set of rows (lines) and columns that describe a video image.'" Defs.' Br. at 11. This is incorrect. The '096 patent defines a "**Frame**" (not "video image") as "a set of rows (lines) and columns that describe a video image. Also referred to as a video frame." Col. 4:31-32. As seen, a "video frame" can describe a video image; thus, the video frame contains data that is used to generate a visual representation of the video image. The specification, including Figures 3a and 3b (*e.g.*, the "image content" signals), of the '096 patent further support LGE's construction that "video image" is a "visual representation" of the **data** in a video signal. *See, e.g.*, Col. 14:39-42 ("...a number of pixel clocks occur between...pulse and the **appearance of a video image**...").

Defendants' construction is also flawed because, when viewed in context of claim 21, it is nonsensical, excludes the embodiment of the invention disclosed in the '096 patent, and even contradicts their own description of the claim. The Defendants recognize that claim 21 is directed to a system that "manipulates a digitized video image when reading it from memory, and then displays the video." Defs.' Br. at 1. Such manipulation allows the invention to "up-

<sup>20</sup> Although they did not disclose the change in their Brief, LGE notes that Defendants altered their construction to add the phrase "generated from the video signal" to its proposed construction after LGE filed its opening claim construction brief.

size or down-size an image on the display screen” and to rotate the image as discussed in the previous section. *See* Col. 9:12-24. However, Defendants’ construction—which they admit cannot be “merely a subset of some (but not necessarily all) of the complete set of image data” (Defs.’ Br. at 12)—precludes these very aspects of the invention, because, for example, by down-sizing the video image, the device necessarily presents a subset of the image data (by removing portions of the image to shrink it).

Defendants’ argument regarding “a video image”<sup>21</sup> and “said video image” (*see* Defs.’ Br. at 11-12) fails for the same reasons. LGE agrees that the term “said video image” needs to be carried consistently through the claim, and this is the reason why the term “video image” should be construed to be “data used to generate a visual representation of a video frame” as proposed by LGE. Claim 21 requires that the element satisfying the “video image” limitation be “presented on a flat panel display” (Col. 31:60), “stored” in “a memory system” (Col. 31:61-62), “siz[ed]” when presented on the flat panel display (Col. 32:3), and “read[]” from “said memory system” (Col. 32:5-6 & 18-19); thus, the construction needs to be broad enough to cover these limitations. Only LGE’s proposed construction satisfies these limitations, because “data” is what is stored and read from the claimed memory system and presented and sized on the flat panel display to provide the video image viewed by the user. However, LGE’s construction is not “too broad” as argued by Defendants (Defs.’ Br. at 12) because it is expressly limited to data that is used to create the visual representation of a video frame.

### 3. Disputed Claim Term #3: “video signal”

LGE’s Construction	Defs.’ Construction
“A signal containing data used to generate a visual representation of a video frame”	“An electronic signal containing information specifying the location and brightness of each point on a display,

<sup>21</sup> LGE notes that the parties are construing the claim term “video image” not “said video image;” thus, Defendants’ criticism about the absence of the word “said” from LGE’s construction is specious. Indeed, Defendants’ own proposed construction (“A video frame described by *a* set of rows and columns...”) lacks the “said” term as well.

	along with the timing signals to place the image properly on the display. Video signal formats include VGA, SVGA, XGA, NTSC, PAL, and SECUM video.”
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As noted by the Defendants, the specification of the '096 patent states that the invention relates “to electronic control systems for accepting video signals of numerous formats and types...” Defs.’ Br. at 13 (citing Col. 1:8-12). However, this passage is not a definition of the term “video signal” as alleged by Defendants, and Defendants’ attempt to shoehorn the definitions of other phrases—namely, “Video Type” and “Video Format”—into the “video signal” claim term should be rejected. Neither the claim nor the specification requires such limits on the “video signal” claim term.

Indeed, a review of the specification, including the passage cited by Defendants themselves, reveals why their proposed language which limits the “video signal” to specific formats is too narrow. For example, in the “Video Format” section of the specification quoted by Defendants, the passage includes a reference to “HDTV (High Definition Television) which *currently has no universally accepted format* but as used herein has 1125 lines of video at 100 Hz...” Col. 4:52-55; *see also* Col. 11:55-64 (Table VI). Interestingly, Defendants fail to include “HDTV” in its proposed construction even though the specification discloses that such signals can be accepted by the claimed system in Table VI.

LGE’s claim construction is not “too broad” and does not “read on non-video signals” as argued by Defendants. Defs.’ Br. at 14. Indeed, LGE’s proposed construction is expressly directed to video signals by requiring such signals to contain “data used to generate a visual representation of a video frame”—*i.e.*, a signal containing a “video image” as construed by LGE in Disputed Claim Term #2. As such, Defendants’ vague argument that LGE’s construction may cover signals “which do not contain the actual video data” is wrong. Moreover, LGE’s proposed claim construction encompasses the language of Defendants’ proposal, without including the



improperly imported limitations from the specification or unnecessarily complex language of Defendants' proposal. *See Konami Corp. v. Roxor Games, Inc.*, 445 F. Supp. 2d 725, 732-33 (E.D. Tex. 2006).

**4. Disputed Claim Term #4: "video signal data rate"**

<b>LGE's Construction</b>	<b>Defs.' Original Construction</b>	<b>Defs.' <i>Changed</i> Construction</b>
"The frequency of the video signal"	"The number that reflects the vertical frequency of the video signal from the video source"	"The frequency of the signal that carries the video data being input from the video source"

Because Defendants altered their claim construction, it appears that the dispute between the parties has been narrowed or eliminated. In any event, Defendants' critique of LGE's proposed construction is without merit. Because Defendants required the parties to parse the "video" claim terms individually, LGE has already construed the term "video signal" as including data—*viz.*, data used to generate a visual representation of a video frame. *See* Disputed Claim Term #3, *supra*. Moreover, it is clear from the plain language of the claim that the video signal is received from a video source; thus, Defendants' inclusion of this phrase in its proposed construction is superfluous and would only confuse the jury. Thus, the Court should adopt LGE's proposed construction of this disputed claim term.

**5. Disputed Claim Term #5: "flat panel display"**

<b>LGE's Construction</b>	<b>Defs.' Construction</b>
"A display device other than a cathode-ray tube (CRT), having a flat front including liquid crystal display (LCD) and plasma flat panel display technology"	"An electronic display with a package thickness that is a small fraction of the display's height or length"

Defendants fail to counter any of the arguments set forth by LGE in its Brief (LGE's Br. at 48-50) in support of LGE's proposed construction of this claim term.<sup>22</sup> Defs.' Br. at 16.

Instead, Defendants argue that claim 21 does not distinguish "from technology viewpoint

<sup>22</sup> Defendants' allegation that they have "identified strong evidence that the claim is invalid" is irrelevant posturing by the Defendants, and further demonstrates the extent to which they improperly have allowed the preliminary infringement and invalidity contentions to color their results-oriented claim construction proposals.

whether the disclosed and claimed circuit is used in a CRT or a flat panel display.” *Id.* This argument, however, is wrong because Defendants ignore the express and limiting language in the preamble of the claim which recites a “system for controlling the size, position and orientation of a video image presented *on a flat panel display.*” *See, e.g., Eaton Corp. v. Rockwell Intl. Corp.*, 323 F.3d 1332, 1339 (Fed. Cir. 2003) (“When limitations in the body of the claim rely upon and derive antecedent basis from the preamble, then the preamble may act as a necessary component of the claimed invention.”). Moreover, Defendants ignore the “orientation” limitation in claim 21, which is clearly directed to solving problems unique to flat panel displays such as LCD displays. *See, e.g.,* Col. 8:67-Col. 9:3.

Moreover, Defendants’ proposed construction is replete with vague phrases that do not clarify the claim language. For example, the phrases “package thickness” and “a small fraction of” are vague and undefined by the Defendants and would unnecessarily confuse the finder of fact. The Court should reject Defendants’ proposed construction and adopt LGE’s proposal.

**6. Disputed Claim Term #6: “column replicate control signal” and “row replicate control signal”**

<b>LGE’s Construction</b>	<b>Defs.’ Construction</b>
<b>“column replicate control signal”:</b> “Signal that controls the number of times a particular column address identified at least in part by a column start control signal is read out of the frame buffer in order to control the size of video image on a display screen”	<b>“column replicate control signal”:</b> “An electronic signal that repeats an entire column of pixels in the image”
<b>“row replicate control signal”:</b> “Signal that controls the number of times a particular row address identified at least in part by a row start control signal is read out of the frame buffer in order to control the size of video image on a display screen”	<b>“row replicate control signal”:</b> “An electronic signal that repeats an entire row of pixels in the image”

Defendants’ proposed claim constructions are incorrect because they are based on a mischaracterization of a passage from the ’096 patent specification cited in their Brief and are counter to the relevant disclosure in the specification. The ’096 patent specification does not

require “the column replicate and row replicate signals control the number of times an *entire* column or row of pixels is repeated in the video image.” Defs.’ Br. at 17 (emphasis in original). Rather, the ’096 patent makes clear that the signals control the number of times a particular *column address* or *row address* is repeated in the video image and that the addressing can be commenced at *any location in the memory space*. Col. 9:12-33; *see also* Col. 22:25-28 (“...by modifying the *memory addresses* that are presented...”).

The passage cited by Defendants does not support their flawed claim constructions, because it is not discussing whether the *entire* row or column is repeated; instead, it is an example showing how to determine the Column Replicate or Row Replicate Factors, which merely calculate *which*  $n^{\text{th}}$  row or  $n^{\text{th}}$  column is repeated or skipped. Col. 16:45-50. The starting and stopping addresses of these rows or columns within the memory are not discussed. Indeed, the table above this passage clearly indicates that the start position for the row or column can fall anywhere between the ranges of 0 and 2047. Col. 16:27-36; *see also* LGE’s Br. at 51-52.

#### 7. Disputed Claim Term #7: “sizing said video image”

LGE’s Construction	Defs.’ Construction
“Controlling the size of the video image on the display screen”	“Altering the size of the existing video image that is stored in memory”

Defendants fail to address the important distinction between the parties’ proposed constructions raised in LGE’s opening brief (*see* LGE’s Br. at 52-53); instead, Defendants attempt to manufacture another issue by criticizing LGE’s use of the indefinite article “a” in its proposed claim construction. Defs.’ Br. at 18. However, LGE has previously noted that the claim term “video image” must be carried consistently through claim 21 (*see* Disputed Claim Term #2, *supra*); thus, LGE is not trying to “ignore the words of the claim itself” as alleged by Defendants. *Id.* As such, LGE has replaced the indefinite articles in its original construction with the definite article “the” so that LGE’s proposed construction now reads “Controlling the

size of the video image on the display screen.” This substitution of “the” for “a” does not change the scope of LGE’s proposed claim construction as noted above; however, it dispatches Defendants’ manufactured criticism of LGE’s proposal.

As noted in LGE’s opening brief, the claim term “sizing said video image” does not require the size necessarily be “altered” when presented on the flat panel display of the system (*see* LGE’s Br. at 51-52) as recited by Defendants’ proposed construction. Thus, Defendants’ construction fails to comport with the disclosure of the ‘096 patent and should be rejected.

**8. Disputed Claim Term #8: “while maintaining a video signal resolution”**

<b>LGE’s Construction</b>	<b>Defendants’ Construction</b>
“Without requiring a change in the video signal resolution received from the video source”	“Without losing pixel data from said video signal from said video source”

Contrary to Defendants’ protestations (Defs.’ Br. at 19), LGE’s claim construction focuses on the “real issue” of this disputed claim term—which is clarifying the claim language with respect to how the video signal resolution is maintained while sizing the video image. *See* claim 21, Col. 32:3-4. It is clear from the ‘096 patent that this accomplished by accepting a wide variety of video signals without requiring the video source to provide a signal with a specific characteristics, such as signal resolution. *See, e.g.*, Col. 2:28-Col. 3:8; Col. 3:24-26; Col. 11:55-64 (Table VI). Defendants’ main issue with LGE’s proposed construction is, at bottom, LGE’s inclusion of the word “resolution” in the proposed construction. However, despite Defendants’ belief otherwise, the Court need not redefine every single word in a disputed phrase, especially when the meaning of the word (like “resolution” here) would be clear to the fact finder. *O2 Micro Intern. Ltd. v. Beyond Innovation Tech. Co., Ltd.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) (recognizing “that district courts are not (and should not be) required to construe every limitation present in a patent’s asserted claims”).

Moreover, Defendants' proposed construction should be rejected because it is vague and improperly excludes certain embodiments covered by claim 21. For example, the claimed invention can "up-size or down-size an image on the display screen." *See* Col. 9:12-24. However, Defendants' construction precludes such aspects of the invention, because, for example, by down-sizing the video image, the device necessarily loses pixel data in the image by only presenting a subset of the data (by removing portions of the image to shrink it). Therefore, Defendants' proposed construction is flawed and should be rejected.

**9. Disputed Claim Term #9: "generating first control signals for reading said video image in said memory system"**

LGE's Construction	Defendants' Original Construction	Defendants' Changed Construction
"Generating first control signals that are used to read the video image from the memory system"	"Creating column count up/down signals and row count up/down signals"	"Creating column count up/down signals and row count up/down signals for reading said video image in said memory system"

Contrary to Defendants' assertion (Defs.' Br. at 20-21), the specification of the '096 patent discloses several different control signals that correspond to "first control signals," and, thus, their attempts to limit them to the "column count up/down" and "row count up/down" signals are improper. Each of these disclosed control signals are input into the image size/position control means and are used for reading the video image in the memory system, which Defendants argue is required by Claim 21. Defs.' Br. at 20-21. For example, the specification notes that "in response to potentiometers"<sup>23</sup> 302-305, the microprocessor issues *control signals...on line 38 leading to the image size/position control unit to control the size and position of the video image* on the display screen." Col. 25:4-9. As noted in LGE's opening brief (Br. at 54), the specification also discloses control signals regarding the particular

<sup>23</sup> The potentiometers control the horizontal and vertical positions of the video image on the display screen and the horizontal and vertical size of the image itself. Col. 24:57-62.

flat panel display being used. Col. 16:23-25 (“...a command is issued to set the stored image size and position parameters into the image size/position control unit 39 by way of line 38.”).

**10. Disputed Claim Term # 10: “image size/position control means...”**

<b>LGE’s Construction</b>	<b>Defs.’ Construction</b>
<p>This limitation may be read as a “means-plus-function” clause in accordance with 35 U.S.C. § 112(6).</p> <p>The function associated with this means plus function element is: generating output column address and output row address control signals.</p> <p>The structure disclosed in the specification for performing this function(s) is/are the circuitry described as the image size/position control unit 39 of Figs. 1 and 8 and any equivalents thereof.</p>	<p>This limitation is a means-plus-function claim limitation under Section 112, ¶ 6.</p> <p><b>Recited Functions:</b> (Construction of Terms Used in Recited Functions are set forth in the below rows. The fact that other language present in this paragraph of claim 21 not included as a recited “function” of the means-plus-function clause does not mean that language is not limiting; Defendants contend that additional language is also limiting.):</p> <ul style="list-style-type: none"> <li>(1) generating the output column address control signals</li> <li>(2) generating output row address control signals</li> <li>(3) generating a pixel clock signal</li> </ul> <p><b>Corresponding Structure:</b></p> <ul style="list-style-type: none"> <li>(1) image size/position control unit 39 (including all the structure shown in Figure 8)</li> <li>(2) image size/position control unit 39 (including all the structure shown in Figure 8)</li> <li>(3) No corresponding structure that performs this function and satisfies the remainder of the limitation.</li> </ul>

In its opening brief, LGE demonstrates how the language of this claim term is read properly as “image size/position control means...responsive to (1) said column start, (2) row start, (3) column replicate, and (4) row replicate control signals, and (5) said first control signals for generating output column address control signals, output row address signals for said memory system<sup>24</sup>, and (6) a pixel clock signal. LGE’s Br. at 55-56. Contrary to Defendants’ argument, one does not need to search for the corresponding structure before reading the claim in such a manner. However, Figure 8 of the ’096 patent supports such a reading, as it shows the same six groups of inputs set forth above. Defendants’ identification of the comma before “and a pixel clock signal” and semicolon after (Defs.’ Br. at 7), also supports LGE’s contention that

<sup>24</sup> The “for said memory system” language links the output column address and output row address signal limitations together, but it does not include the pixel clock limitation. This provides further support for this reading of the claim.

the limitation is the last item in the list of six inputs to which the image size/position control means is responsive. If the Court agrees with Defendants that this term would be invalid if construed to require generation of a pixel clock signal, the Court should adopt the equally-supportable construction set forth above by LGE to avoid invalidating the claim. *Modine Mfg. Co. v. United States Int'l Trade Comm'n*, 75 F.3d 1545, 1556 (Fed. Cir.1996) (“When claims are amenable to more than one construction, they should when reasonably possible be interpreted so as to preserve their validity.”).

However, if the Court determines that generation of a pixel clock signal is a function of this claim term, it is clear that there is structure in the specification to support it. Defendants are incorrect when they claim there is no clearly linked structure to this function. There are several structural examples in the specification that are clearly linked to the recited pixel clock signal generation. To show this, it is helpful to trace the pixel clock signal back from the frame buffer output control unit 42. As seen in the annotated figure below, control unit 42 receives a pixel clock signal from the image size/position control unit 39 via line 65. Col. 27:45-49; Col. 8:60-62. This timing signal is used by the frame buffer output control unit 42 for reading the video image from the memory (Col. 25:61-63), and used by the image size/position control unit 39 to generate output column and row address control signals (Col. 21:59-64). The pixel clock signal arrives at image size/position control unit 39 via line 41 from the flat panel timing generator 29, which is in turn connected with pixel clock generator 28. *Id.*; Col. 6:35-37.

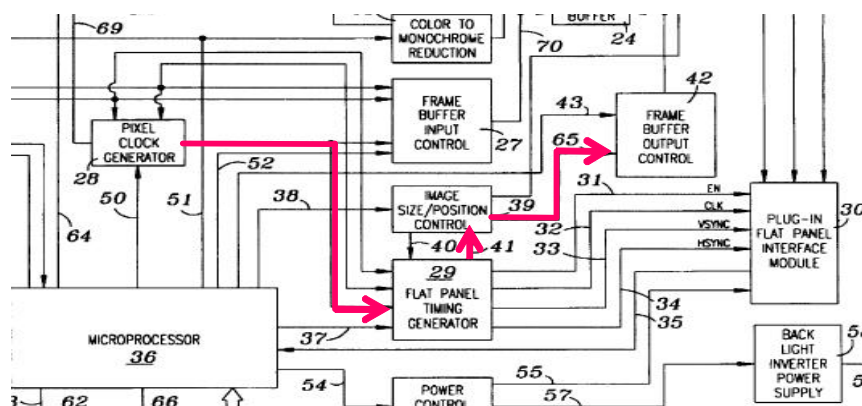


FIG. 1

Thus, under either scenario, LGE's claim construction is fully supported by the specification and should be adopted by the Court.

**11. Disputed Claim Term # 11: "output column address control signals" and "output row address control signals"**

<b>LGE's Construction</b>	<b>Defendants' Original Construction</b>	<b>Defendants' Changed Construction</b>
<b><u>output column address control signals:</u></b> "Signals that control the column address read out of memory"	<b><u>output column address control signals:</u></b> "Column address signals for outputting video data from memory"	<b><u>output column address control signals:</u></b> "A signal that carries a column address for outputting video data from the memory"
<b><u>output row address control signals:</u></b> "Signals that control the row address read out of memory"	<b><u>output row address control signals:</u></b> "Row address signals for outputting video data from memory"	<b><u>output row address control signals:</u></b> "A signal that carries a row address for outputting video data from the memory"

Defendants argue that LGE's proposed claim construction is wrong because it is based on an allegedly incorrect description of the claimed system—namely, that "the image size/position control unit 39 supplies controls signals to the frame buffer output control unit 42, which in turn supplies address signals to the frame buffers." Defs.' Br. at 21-22. However, a review of the '096 patent reveals that LGE's understanding comports exactly with the specification. For example, the '096 patent states:

The image size/position control unit 39 controls the relative size and position of the incoming video images on the display screen. In response to signals received from the microprocessor 36, the unit 39 determines the display screen size, sizes the video image



up or down to accommodate the display screen, and reprograms the flat panel timing generator 29 to be compatible with the image size as is further explained below in connection with the description of FIG. 8. ***The image size/position control unit 39 also creates a set of timing clocks and control signals that are provided to a frame buffer output control unit 42, which in turn addresses memory locations in the frame buffers.***

***The output of the control unit 39 is connected to a first input of frame buffer output control unit 42, which receives sizing, position, and orientation information from microprocessor 36 on line 43....***

Col. 8:38-62. *See also* Col. 22:25-28 (“In operation, the image size/position control unit 39

***provides*** image positioning, image size, and image orientation ***by modifying*** the memory

addresses that are presented to the frame buffers 20, 24, and 25.”) More specifically:

***The resulting output*** of the adder/subtractor 205 [of image size/position control unit 39] is a column address which ***is applied by way of bus 207 to the frame buffer output control unit 42*** by way of busses 207 and 71.

In like manner, when the overflow output of counter 201 and the image row start signal at the output of latch 210 are a logic one, the counter 211 is enabled, and the counter 211 counts up or down depending upon the logic level of the line 212. The output of the counter 211 is a primary row address from which the row replicate value at the output of latch 215 is added or subtracted depending upon the sign of the replicate value. ***The resulting output*** of adder/subtractor 213 is a row address which ***is applied by way of busses 217 and 71 to the frame buffer output control unit 42.***

Col. 22:52-67. As seen, the image size/position control means 39 generates various control signals used modify (or control) the column and row address read out of memory; thus, LGE’s construction is supported by the specification and should be adopted by the Court.

## 12. Disputed Claim Term #12: “pixel clock signal”

LGE’s Construction	Defs.’ Construction
“A clock signal used to synchronize pixel operations for driving the flat panel display.”	“A clock signal used to synchronize all pixel operations for processing video data.”

There appear to be two aspects of the dispute here. As to the first, Defendants seek to require that the “pixel clock signal” synchronize “all” of the relevant operations. The claim language does not so limit the claim and there is no justification for reading the word “all” from the specification into the claim. The important aspect of the pixel clock is “synchronization,” and both parties agree on that. With respect to the second aspect of the dispute, a pixel clock is certainly part of the signaling that ultimately drives the flat panel display. LGE’s construction

accurately reflects that position. However, in order to narrow the dispute, the construction could alternatively read: “a clock signal used to synchronize pixel operations for processing video data.”

**13. Disputed Claim Term #13: “frame buffer output control means...”**

<b>LGE’s Construction</b>	<b>Defendants’ Original Construction</b>	<b>Defendants’ Changed Construction</b>
<p>This limitation may be read as a “means-plus-function” clause in accordance with 35 U.S.C. § 112(6) comprising the following function(s): reading <i>the</i> video image from the memory system.</p> <p>In the specification, of the ’096 patent, structure(s) performing the function(s) reciting in this claim is/are the circuitry described as the frame buffer output control unit 42 of Figs. 1 and 17 and Output FIFO 356 (Fig. 14) and any equivalents thereof.</p>	<p>This limitation is a means-plus-function claim limitation under Section 112, ¶ 6.</p> <p><b>Recited Functions:</b> (Construction of Terms Used in Recited Functions are set forth in the below rows. The fact that other language present in this paragraph of claim 21 not included as a recited “function” of the means-plus-function clause does not mean that language is not limiting; Defendants contend that additional language is also limiting.): (1) reading said video image from said memory system</p> <p><b>Corresponding Structure:</b> (1) frame buffer output control unit 42 (including the structure shown in Figure 17); gate 358, and Output FIFO 356.</p>	<p>This limitation is a means-plus-function claim limitation under Section 112, ¶ 6.</p> <p><b>Recited Functions:</b> (Construction of Terms Used in Recited Functions are set forth in the below rows. The fact that other language present in this paragraph of claim 21 not included as a recited “function” of the means-plus-function clause does not mean that language is not limiting; Defendants contend that additional language is also limiting.): (1) reading said video image from said memory system</p> <p><b>Corresponding Structure:</b> Frame buffer output control unit 42 (including the structure shown in Figure 17) and Output FIFO 356.</p>

Defendants changed their construction to remove the gate 358 from the “corresponding structure” of its proposal. In response to Defendants’ criticism of LGE’s use of the indefinite article “a” in its proposed construction (*see* Defs.’ Br. at 9), LGE is willing to substitute the definite article “the” in place of the word “a” in its claim construction. LGE refers to Figure 1 of the patent because that figure shows circuit interconnections. Thus, it appears that the conflict between the parties has been greatly diminished or eliminated.

**14. Disputed Claim Term #14: “timing control means...”**

<b>LGE’S Construction</b>	<b>Defs.’ Construction</b>
<p>This limitation is a means-plus-function claim limitation under Section 112, ¶ 6.</p> <p><b>Recited Functions:</b></p>	<p>This limitation is a means-plus-function claim limitation under Section 112, ¶ 6.</p> <p><b>Recited Functions:</b> (Construction of Terms Used in</p>

<p>? generating therefrom enable, vertical synchronization, horizontal synchronization, and first clock signals for driving said flat panel display;</p> <p>? generating column start, row start, column replicate, and row replicate control signals for sizing said video image while maintaining a video signal resolution; and</p> <p>? generating first control signals for reading said video image in said memory system.</p> <p><b>Corresponding Structure:</b> Microprocessor 36, sync separator 14, and flat panel timing generator 29 (of Figures 1 and 7, including equivalents thereof)</p>	<p>Recited Functions are set forth in the below rows. The fact that other language present in this paragraph of claim 21 not included as a recited “function” of the means-plus-function clause does not mean that language is not limiting; Defendants contend that additional language is also limiting.):</p> <p>(1) generating from the video signal enable, vertical synchronization, horizontal synchronization, and first clock signals for driving said flat panel display</p> <p>(2) generating column start, row start, column replicate, and row replicate control signals for sizing said video image while maintaining a video signal resolution</p> <p>(3) generating first control signals for reading said video image in said memory system</p> <p><b>Corresponding Structure:</b></p> <p>(1) Flat panel timing generator 29 (including all the structure shown in Figure 7) and sync separator 14</p> <p>(2) Microprocessor 36</p> <p>(3) Microprocessor 36</p>
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The parties largely agree on this term. As to the functional language, Defendants chide LGE for purportedly backing away from the agreed upon construction of “generating therefrom.” Def’s Br. at 4. That is nonsense. The parties already agreed on the construction of “therefrom;” thus, it would already be construed within the context of the “timing control means” language considered here. Thus, the requirement that the timing control means generate “from the video signal” would be part of the claim. As for the structure, Defendants’ improperly restrict the scope of the claims by demanding a one-to-one correspondence between the claim’s sub-structures and sub-functions. The circuits operate together to generate a functional output; it would be wholly improper to parse the correspondence in the manner suggested by Defendants. And there certainly is no lack of “linking” between the functions and structures – the identity of the structures that correspond to the functions is clear to everyone.

### **CONCLUSION**

For at least the foregoing reasons, the Court should adopt LGE’s constructions in their entirety.



**CONCLUSION**

For at least the foregoing reasons, the Court should adopt LGE's constructions in their entirety.

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

I hereby certify that a true and correct copy of the foregoing document was served by e-mail via the Eastern District of Texas ECF System to all counsel of record on June 13, 2008.

/s/ James A Fussell  
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